

In the Claims:

1 (currently amended): A projector comprising:

a housing;

a light source installed in the housing;

a color wheel for separating the light from the light source into color light;

an image modulator for modulating the color light from the color wheel, and projecting the color light to form an image on a screen;

a scalar connected to the image modulator for controlling the image modulator to create a plurality of gray-level images for each of one or more predetermined colors; and

a control circuit for projecting an on screen display (OSD) on a screen, the OSD comprising the plurality of gray-level images created by the scalar, and a user interface for manually adjusting a color wheel delay of the projector until the gray-level images corresponding to each color display the proper color on the OSD, thereby synchronizing the color wheel with the image modulator.

2 (original): The projector of claim 1 wherein the image modulator is a digital micromirror device (DMD).

3 (original): The projector of claim 1 wherein the gray-level image has 32 gray-levels.

4 (original): The projector of claim 1 wherein gray-level images are generated for 3 colors.

5 (original): The projector of claim 4 wherein the 3 colors having gray-level images are red, green, and blue.

6 (currently amended): A method for manually adjusting the color wheel delay of a projector, the projector comprising a color wheel for separating light into color light, a image modulator for modulating the color light from the color wheel, and a control circuit for controlling the image modulator to operate synchronously with the color wheel, the method comprising:

using a scalar to control the image modulator to create a plurality of gray-level images for each of one or more predetermined colors; and

utilizing a control circuit to project an on screen display (OSD) on a screen, the OSD comprising the plurality of gray-level images created by the scalar; and

observing the OSD, and manually adjusting a color wheel delay of the projector with a user interface connected to the control circuit until the gray-level images corresponding to each color display the proper color on the OSD, thereby synchronizing the color wheel with the image modulator.

7 (cancelled):

8 (original): The method of claim 6 wherein the image modulator is a digital micromirror device (DMD).

9 (original): The method of claim 6 wherein the gray-level image has 32 gray-levels.

10 (original): The method of claim 6 wherein gray-level images are generated for 3 colors.

11 (original): The projector of claim 10 wherein the 3 colors having gray-level images are red, green, and blue.

12 (new): A projector comprising:

a housing;

a light source installed in the housing;

a color wheel for separating the light from the light source into color light;

an image modulator for modulating the color light from the color wheel, and projecting the color light to form an image on a screen;

a control circuit connected to the image modulator for controlling the image modulator to operate synchronously with the color wheel;

a user interface for controlling the color wheel delay value; and

a scalar connected to the image modulator for generating a gray-level image signal;

wherein the color light is modulated to form a gray-level image on the screen through a gray-level image signal outputted to the image modulator, and the image modulator is controlled by the user interface to operate synchronously with the color wheel according to the gray-level image.

13 (new): A method for manually adjusting the color accuracy of a projector, the projector comprising a color wheel for separating light into color light, a image modulator for modulating the color light from the color wheel, and a control circuit for controlling the image modulator to operate synchronously with the color wheel, and a user interface for manually adjusting the color wheel delay value, the method comprising:

- (a) providing a scalar;
- (b) using the scalar to control the image modulator to display a plurality of gray-level images for at least one predetermined color on a screen; and
- (c) observing according to the plurality of gray-level images corresponding to the predetermined color, and using the user interface for manually adjusting the color wheel delay value and the control circuit to control the image modulator to operate according to rotation of the color wheel for accurately projecting an image on the screen.

14 (new). The projector of claim 1, in which said user interface comprises control keys accessible to said user which allow said user to increase or decrease the color wheel delay value.

15 (new). The projector of claim 1, in which said on screen display (OSD) also displays an adjustment check that allows the user to see how much the color wheel delay value has been adjusted.